U.S. Department of Justice

United States Attorney
Southern District of New York

The Silvio J. Mollo Building
One Saint Andrew's Plaza
New York, New York 10007

May 6, 2016

BY ECF

The Honorable Valerie E. Caproni
United States District Judge
Southern District of New York
40 Foley Square
New York, New York 10007

          Re: United States v. Kevin Johnson, 15 Cr. 565 (VEC)

Dear Judge Caproni:

          The Government respectfully writes, in advance of the conference scheduled for May 9, 2016, to provide the Court with additional information relating to the defendant's request, pursuant to Rule 17 of the Federal Rules of Criminal Procedure, for a subpoena compelling the New York City Office of the Chief Medical Examiner ("OCME") to turn over the source code for the Forensic Statistical Tool ("FST"). As detailed below, the defendant has failed to state, with any particularity, how the source code is relevant to his eventual challenge under Federal Rule of Evidence 702 and *Daubert* v. *Merrell Dow*, 509 U.S. 579 (1993), to the reliability of OCME's determination that (i) with respect to one firearm recovered in this case, it was 156 times more probable that the firearm contained the defendant's DNA and the DNA of another unknown unrelated person rather than two unknown unrelated persons, and (ii) with respect to a second firearm, it was 66 million times more probable that the firearm contained the defendant's DNA and the DNA of two unknown unrelated persons rather than three unknown unrelated persons.

          Under Federal Rule of Evidence 702, the Court may admit "[a] witness who is qualified as an expert . . . if: (a) the expert's scientific . . . knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case." Fed. R. Evid. 702; *see also Daubert*, 509 U.S. at 592-93 (explaining that the district court must assess "whether the reasoning or methodology underlying the [expert's] testimony is scientifically valid and . . . whether that reasoning or methodology properly can be applied to the facts in issue"). In *Daubert*, the Supreme Court set out a list of non-exclusive factors that the trial court may consider in determining whether an expert's reasoning or methodology is reliable: (1) whether the theory or technique used by the expert can be, or has been, tested; (2) whether the theory or technique has been subjected to peer review or publication; (3) the known or potential rate of error of the method used; (4) whether there are standards controlling the technique's operation;

May 6, 2016
Page 2

and (5) whether the theory or method has been generally accepted within the relevant scientific community. 509 U.S. at 593-94.

In his letter, the defendant argues that there are several questions about FST, the answers to which could only be revealed through an examination of the source code.[1] *See* Def. Ltr. at 3. For example, the defendant contends that "published studies regarding FST do not reveal the formulae by which FST reaches the LR." *Id.* This is simply incorrect, because the formulae are contained in both the FST validation study and the 2012 paper cited by the defendant in footnote 5. The defendant also notes that FST "adjusts only for intra-individual correlation with a correction to the expedited population frequencies of homozygous genotypes," but argues that the meaning of this statement is not "readily apparent." *Id.* at 3-4. The defendant and his lawyers can ask their team of experts to explain the meaning of the statement, which refers to theta correction, a basic principle of forensic statistics that accounts for individuals sharing alleles. Notably, theta correction is also discussed in the validation study and the 2012 paper, with references to the 1996 National Research Council paper "The Evaluation of Forensic DNA Evidence," and the Scientific Working Group on DNA Analysis Methods' Interpretation Guidelines for Autosomal STR Typing by Forensic DNA Testing Laboratories.

The defendant also asserts that the source code will answer questions about how FST treats a sample size that is not identical to the sample size intervals used in the validation study. *Id.* at 3. Of course, not every DNA sample tested in a real case will match the sample sizes chosen for the validation study, but the validation study addresses this issue, and the sample sizes chosen by FST for its validation study were vetted as part of the validation process. If the defendant wants to challenge the sample sizes as unreliable, he does not need the source code to do so. Simply put, the defendant has not identified a valid need for the source code. Instead, he has merely identified areas of FST that are allegedly unclear, but which can be addressed through cross-examination of the Government's expert at trial, and if he chooses, through the direct testimony of his own expert. *See People* v. *Carter*, No. 2573/14, 2016 WL 239708, at 3 (Sup. Ct. Queens Cnty. Jan. 12, 2016, Schwartz, J.) ("Every one of defendant's objections to the FST— including the myriad invalid assumptions upon which defendant claims FST is based—could be raised during the cross-examination of the People's expert at trial and the direct testimony of defendant's own expert.").

In addition, the defendant notes that there are several experts who have reverse engineered FST (Def. Ltr. at 5), though he does not mention that one of his own experts is included in that group. Moreover, "there are many other software packages, other than FST, that state likelihood ratios regarding the probability that a defendant is a contributor to a DNA mixture and the likelihood that he is not." *Carter*, 2016 WL 239708, at 3. Thus, the defendant's experts can use their own version of FST and any of the other available software to "provide the jury with an alternative likelihood ratio." *See id.* Indeed, courts considering this issue have noted the availability of other programs when denying a defendant's request for FST source

---

[1] The defendant's policy view on open- vs. closed-source software is just that – a policy view, and it is not relevant to the question before the Court: whether the source code is relevant to challenging the reliability of FST.

May 6, 2016
Page 3

code. *See People* v. *Rochard*, No. 10576/13 (Sup. Ct. Kings Cnty. Mar. 8, 2016, D'Emic, J.) (denying petition for *subpoena duces tecum* for FST source code where defense had already been provided with the complete forensic biological case files for the DNA testing at issue, and defense counsel had successfully reverse engineered the source code); *See People* v. *Johnson*, No. 00502/14 (Sup. Ct. Bx. Cnty. Apr. 21, 2016, Clancy) (granting OCME's motion to quash subpoena requiring production of FST source code in case where defendant's expert had reverse engineered FST).

As noted in the Government's May 3 letter, every state court judge to address this issue has found that defendants are not entitled to the FST source code. The defendant dismisses these cases as inapposite because New York does not follow the *Daubert* standard. The defendant's desire to brush aside these state court decisions – which have analyzed the reliability of FST under the *significantly more restrictive* standard set forth in *Frye* v. *United States*, 293 F. 1013 (D.C. Cir. 1923) – is not surprising. *See United States* v. *Williams*, 506 F.3d 151, 161-62 (2d Cir. 2007) (noting that the *Daubert* test "embodies a more liberal standard of admissibility for expert opinions" than the *Frye* standard). Even under the more restrictive *Frye* standard, the overwhelming majority of decisions have admitted FST evidence over objections.[2] *See Carter*, 2016 WL 239708; *People* v. *Benyehudah*, Ind. No. 453/2014 (N.Y. Sup. Ct. Kings Cnty. Dec. 10, 2015, Sullivan, J.); *People* v. *Lopez*, ___ N.Y.S.3d ____, 2015 WL 7434487 (N.Y. Sup. Ct. Bronx Cnty. Nov. 20, 2015, Fabrizio, J.); *People* v. *Zorilla*, Ind. No. 3418/2013 (N.Y. Sup. Ct. Bronx Cnty. Nov. 20, 2015, Mogulescu, J.); *People* v. *Debraux*, ___ N.Y.S.3d ____, 2015 WL 5778744 (N.Y. Sup. Ct. N.Y. Cnty. Sept. 24, 2015, Kahn, J.); *People* v. *Murphy*, Ind. No. 5762/2013 (N.Y. Sup. Ct. Kings Cnty. Sept. 21, 2015, D'Emic, J.); *State* v. *Rochat*, Ind. No. 13-07-1002-I (N.J. Super. Ct. Bergen Cnty. Aug. 6, 2015, Steele, J.), *mot. for leave to appeal denied*, *State* v. *Rochat*, No. 13-07-01002-I (N.J. App. Ct. Sept. 24, 2015, Koblitz & Kennedy, JJ.); *People* v. *Brown*, Ind. No. 58/2012 (N.Y. Sup. Ct. N.Y. Cnty. June 4, 2015, Zweibel, J.); *People* v. *James*, Ind. No. 81/2013 (N.Y. Sup. Ct. Richmond Cnty. May 20, 2015, 2015, Ozzi, J.); *People* v. *Belle*, 7 Misc. 3d 1218, 2015 WL 2131497 (N.Y. Sup. Ct. Bronx Cnty. Apr. 29, 2015, Fabrizio, J.); *People* v. *Johnson*, Ind. No. 4728/2013 (N.Y. Sup. Ct. Kings Cnty. Apr. 21, 2015, D'Emic, J.); *People* v. *DeGracia*, Ind. No. 802/2014 (N.Y. Sup. Ct. Queens Cnty. April 16, 2015, Serita, J.); *People* v. *Graham*, Ind. No. 2784/2012 (N.Y. Sup. Ct. Bronx Cnty. Feb. 20, 2015, Benitez, J.); *People* v. *Colon*, Ind. No. 5073/2010 (N.Y. Sup. Ct. N.Y. Cnty. Nov. 19, 2014, Carro, J.); *People* v. *Daly*, Ind. No. 411/2012 (N.Y. Sup. Ct. N.Y. Cnty. Sept. 10, 2014, Moore, J.); *People* v. *Williams*, Ind. No. 3445/2008 (N.Y. Sup. Ct. Bronx Cnty. March 5, 2014, Moore, J.), *mot. for reconsideration denied* (N.Y. Sup. Ct. Bronx Cnty, May 20, 2015, Moore, J.); *People* v. *Rodriguez*, Ind. No. 5471/2009, at (N.Y. Sup. Ct. N.Y. Cnty. Oct. 24, 2013, Carruthers, J.); *People* v. *Styles,* 40 Misc.3d 1205(A) (N.Y. Sup. Ct. Kings Cnty. June 13, 2013, Donnelly, J.); *People* v. *Easley*, No. 2340/2011 (N.Y. Sup. Ct. Queens Cnty. May 17, 2013) (Oral ruling); *People* v. *Garcia,* 39 Misc. 3d 482 (N.Y. Sup. Ct. Bronx Cnty. Feb. 13, 2013,

---

[2] To date, the Government is aware of only a single case in which FST was deemed to be inadmissible, notably after the defendant challenged FST without access to the source code. *See People* v. *Collins*, 49 Misc. 3d 595, 625 (N.Y. Sup. Ct. Kings Cnty. July 2, 2015, Dwyer, J.). Since *Collins*, sixteen decisions have rejected *Collins* and held, under *Frye* that FST evidence is admissible.
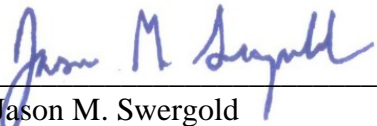
May 6, 2016
Page 4

Iacovetta, J.); *People* v. *Caballero,* Ind. No. 10278/2011 (N.Y. Sup. Ct. Queens Cnty. April 15, 2013, Knopf, J); *People* v. *Whetstone,* Ind. No. 5728/12 (N.Y. Sup. Ct. N.Y. Cnty. June 17, 2013, White, J.); *People* v. *Wortham,* Ind. No 3148/11 (N.Y. Sup. Ct. N.Y. Cnty. September 6, 2012, Ward, J.), *mot. for reconsideration denied* (N.Y. Sup. Ct. Bronx Cnty. November 21, 2012, Ward, J.); *People* v. *Foster–Bey,* Ind. No 9239/10 (N.Y. Sup. Ct. Kings Cnty. May 22, 2013, Goldberg, J.); *People* v. *Bowens,* Ind. No. 336/2011 (N.Y. Sup. Ct. Richmond Cnty. April 29, 2013, Rooney, J.); *People* v. *Brissett,* Ind. No. 847/2010 (N.Y. Sup. Ct. Bronx Cnty. February 25, 2013, Webber, J.)).

The defendant has not properly articulated how FST source code is relevant to his challenge to the reliability of FST. Accordingly, his request for a Rule 17 subpoena should be denied.

Respectfully submitted,

PREET BHARARA
United States Attorney for the
Southern District of New York

By:_____

Jason M. Swergold
Assistant United States Attorney
(212) 637-1023

cc: Christopher Flood, Esq. (via ECF)
        Sylvie Levine, Esq. (via ECF)
        Robert Baum, Esq. (via ECF)